III. REMARKS

The independent claims of the present application are numbered 19, 59, 82, 85, 94, 97, 122 and 123. Previously pending independent claim 98 has now been cancelled without prejudice, while independent claims 122 and 123 are newly introduced.

With respect to the claims 99-121, that were previously withdrawn, these claims (or claims with substantially the same subject matter) have already been filed in a divisional application. Accordingly, the claims 99-121 are canceled in this application.

1. Summary of Claim Rejections Under 35 U.S.C 103(a):

The present Official Action may be summarized as follows. Claims 19-23, 27-29, 48, 59, 60-65, 67-69, 71-73, 77-79, 81-85, 87, 90-91 and 93-98 are rejected under 35 U.S.C. 103(a) as unpatentable over Talbot (US Patent No.: 4,411,017) in view of Bocci et al. (US Patent No.: 4,440,976).

Claims 24-26 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Talbot in view of Bocci and further in view of Billström et al. (US Patent No.: 5,590,133). (See point 23 of the present Official Action)

Claims 31-34, 66-67 and 69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Talbot in view of Bocci and further in view of Lewis et al. (US Patent No.: 6,192,255). (See point 27 of the present Official Action)

Furthermore, claims 35 and 70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Talbot in view of Bocci and further in view of Kniffin et al. (US Patent No.: 6,072,402). (See point 32 of the present Official Action)

Additionally, claims 44-47 and 55-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Talbot in view of Bocci and further in view of Serbetciouglu et al.

(US Patent No.: 5,719,918) and further in view of Kniffin et al. (See point 34 of the present Official Action)

Claims 36-40, 41-43, 74-76, 80, 86, 88-89 and 92 are rejected under 35 U.S.C. 103(a) as being unpatentable over Talbot in view of Bocci and further in view of Kennedy et al. (European Patent No. 0 680 171 (A2)). (See point 41 of the present Official Action)

And finally, claims 49-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Talbot in view of Bocci and further in view of Kennedy and further in view of US Patent No. 5,767,778, referred to by the Examiner as "Lewis". (See point 48 of the present Official Action)

It is noted that Talbot in view of Bocci are the primary references employed in rejecting the claims, and wherein the teachings of further references are combined with the teachings of Talbot in view of Bocci for rejection of certain claims as noted above. All of the claims rejected under 35 U.S.C. 103(a) in points 23, 27, 32, 34, 41 and 48 of the Official Action are dependent claims, and it is the Applicant's view that all of the newly amended independent claims are both novel and non-obvious with respect to the combination of Talbot and Bocci. The Applicant maintains that all of the dependent claims variously rejected in the aforementioned points of the Official Action are also novel and non-obvious with respect to the combination of Talbot and Bocci when further combined with the other cited documents as set forth by the Examiner.

With respect to the rejection put forward in point 48 of the Official Action, the Applicant would further point out that US Patent No. 5,767,778, referred to by the Examiner as "Lewis" is in fact due to **Stone**. Furthermore, the filing date of this patent is **6th March 1996,** which post-dates the priority date of the present application (**15th December 1995**). Thus the Stone ("Lewis") patent is not prior art for the present application and cannot be combined validly with any other document to formulate an obviousness rejection. In view of this observation, the

Applicant respectfully requests the Examiner to reconsider his rejection of claims 49-54 based on the combination of Talbot, Bocci, Kennedy and Stone.

2. **Summary of Talbot** (US Patent No.: 4,411,017)

The Talbot patent discloses a communication system including a central station and a plurality of remote stations, such as mobile telephones, in which signaling transmissions that establish a communications channel between the central station and the remote stations are conducted in a clear (unenciphered) mode and subsequent voice transmissions between the central and remote stations are conducted in a secure (enciphered) mode (see abstract, for example).

Each remote station has a unique code assigned to it which is used by it to at least decipher incoming enciphered voice transmissions from the central station and by the central station to encipher outgoing voice transmissions to the remote station (see abstract). In a first embodiment, the same unique code is also used to encipher outgoing voice transmissions from the remote station to the central station and by the central station to decipher incoming voice transmissions from the remote station (see abstract and column 3, lines 37 to 47, for example). However, according to Talbot "complete system privacy can be assured if each mobile station is incapable of receiving a message intended for another party" (which is accomplished by using the unique code at each remote station for deciphering transmissions from the central station), and therefore, in an alternative embodiment, the remote stations may use a commonly assigned code for enciphering their respective transmissions (column 3, lines 47 to 54, for example and abstract). Thus, in this embodiment, each remote station in the communications system uses the same code for enciphered voice transmission to the central station.

In an embodiment of the communication system according to Talbot, the central station switches its equipment automatically into an enciphered mode of communication upon completion of the tone signaling that establishes a communications channel between it and a remote station (see abstract). The remote

station detects receipt of an enciphered voice transmission from the central station and automatically switches to a secure mode (column 4, lines 7 to 12) using either its uniquely assigned code or the commonly assigned code, depending on the configuration of the communication system. In an alternative embodiment, switching of the central station into secure mode is responsive to a request for secure service from a calling or called party (see abstract and column 2, lines 44 to 55, for example). In either case, however, switching of the remote station is responsive to receipt and detection of an enciphered voice transmission from the central station (see abstract and column 2, lines 57 to 64, for example).

In order to detect the presence of an enciphered voice transmission, a remote station implemented according to the teachings of the Talbot patent includes a logic device (labelled 59 in Figure 1), which detects the presence of received data at the output of deciphering portion 61 of a secure voice module (SVM) (see column 8, lines 10 to 15). Whenever enciphered voice data is being received, deciphering portion 61 provides a deciphered voice data output, as well as a signal indicating the presence of deciphered data. Logic device 59 detects the deciphered data presence signal and in response thereto provides a secure control signal to switch control 65, which in turn causes switch 67 to interconnect the output of the enciphering portion 63 of the secure voice module (SVM) with the input to the remote station's transmitter 55 (column 8, lines 15 to 23). This causes voice transmissions from the remote station to the central station to be enciphered.

3. **Summary of Bocci** (US Patent No.: 4,440, 976)

US patent no. 4,440,976 (Bocci) relates to a receiver for digitally encoded voice signals that is adapted to decrypt signals encrypted according to a plurality of different keys (column 2, lines 41 to 43). The receiver subjects a received encrypted signal simultaneously to decryption according to each of the keys available to the receiver. If the encrypted signal is decrypted by the wrong key in any one of the decryption units, the resulting signal is not passed further for conversion into audio. On the other hand, if one of the plurality of decryption units available to the receiver

contains the proper key for decrypting the signal, then the signal coming from that unit will be decrypted properly and will be passed for conversion into an audio signal. If the receiver receives an encrypted signal for which it does not have the key, the audio is muted (column 2, lines 43 to 54).

In a first embodiment according to Bocci, (illustrated in Figure 1 and described in detail between column 3 lines 10 and 66), a receiver is adapted to receive and decode transmissions automatically when the transmission, which is received by the receiver, may have been encoded using one of a plurality of ciphering keys (column 3, lines 10 to 15). The circuit of Figure 1 is not, however, adapted to relate a transmitting channel to a particular channel that has been received and decrypted or to enable encrypted transmission (column 3, lines 15 to 18). Thus, in order to provide a user with the capability to select the same key for return transmission, Bocci proposes informing the user of a key number that was used to encrypt the received message by means of a display unit 28 (column 3, lines 57 to 66).

More specifically, a receiver according to Bocci's first embodiment includes a plurality of encode-decode modules (12, 14, 16), placed in parallel, each of which is adapted to decrypt a received signal according to a respective one of three keys (1, 2 or 3) available to the receiver (column 3, lines 23 to 32). The output of each encode-decode module is applied to a corresponding delta-modulation detector (18, 20, 22), adapted to test for the presence of delta modulation in the output of the encode-decode module to which it is connected (column 3, lines 32 to 38). Due to the nature of the encryption used in Bocci's communication system (see column 1, lines 10 to 61), the only signal that will comprise delta modulation at the output of module 12, 14 or 16 will be a signal that has been decrypted. A signal that has been encrypted according to any key other than keys 1, 2 or 3 will not be decrypted and will appear as noise at the outputs of modules 12, 14 and 16 (column 3, lines 38 to 44). According to Bocci, display unit 28 is adapted to display a visual indication, such as a light, in response to a signal from the particular delta-modulation detector 18, 20 or 22. Illumination of a particular light signals that a received encrypted signal has been successfully decrypted using a particular key (column 3, lines 59 to 63).

Such an indication enables an operator to make a manual selection of the same key in order to make a return transmission (column 3, lines 63 to 66).

In a second embodiment, described between column 3, line 67 and column 4, line 52 of the Bocci patent and illustrated in Figure 2, the receiver is modified to enable automatic selection of an encryption key for transmission from the receiver based on the particular channel selected or as a result of manual selection. The receiver according to the second embodiment may also include a display providing a visual indication of the key used to decrypt the received signal (column 4, lines 43 to 48).

4. Consideration of Amended Independent Claims in view of Talbot and Bocci

In response to the Examiner's rejection of the independent claims of the present application under 35 U.S.C. 103(a) as being unpatentable over Talbot in view of Bocci, the Applicant makes the following observations.

Firstly, it is the Applicant's view that there would be no motivation for the skilled person to attempt any combination of the teachings of Bocci with those of Talbot. Specifically, Talbot's disclosure relates to a communication system in which selection of an enciphering mode for return transmission from a remote station to a central station is performed automatically with no choice of enciphering key available to the user of the remote station. In one embodiment, Talbot discloses enciphering of the return transmission using a unique code assigned to the remote station (which is the same as that used in secure transmission from the central station to the remote station), and in a second embodiment the code used for secure communication in the return direction is a common code which is the same for all remote stations in the communication system. In neither case is there a possibility for a plurality of different codes to be used in transmission from the central station to the remote station or in the return direction, as in Bocci. Since the objective of Bocci's indication is to inform the user of which encryption key is used to decrypt an encrypted voice signal at the receiver, it is the Applicant's view that no motivation can be derived

from Talbot that would lead a skilled person to consider a combination of Bocci with Talbot.

Furthermore, even though the Applicant is of the opinion that there would be no motivation for the skilled person to combine the teachings of Bocci with Talbot, it is the Applicant's view that should such a combination be attempted, it would not lead to the present invention as defined by the newly amended claims.

More specifically, the independent claims have now been amended to recite *"indicating to a user of the mobile station that the mobile communication network is configured to use an enciphered mode of communication"*. It is the Applicant's contention that there is no possible combination of Bocci with Talbot that would provide a user of a mobile station with an indication that a mobile communication network is configured to use an enciphered mode of communication as now claimed.

In particular, and as described in Bocci, for example between column 3, lines 23 and 56, a receiver of digitally encoded voice signals is provided with a number of encode-decode units, each of which is arranged to decrypt a received signal using a specific one of the encryption keys available to the receiver. Thus, only a received signal that has been encrypted using one the available encryption keys will be decrypted by the receiver and, in an embodiment where indication of the key used to decrypt a received signal is provided, only in this situation a corresponding indication will be provided. This means that if the receiver does not comprise any encode-decode unit adapted to decrypt a received signal using the correct encryption key, it will not be possible to decrypt the signal and no indication will be provided to the user.

It is important to appreciate that the absence of an indication (i.e. a situation in which no lights are illuminated) does not provide a user of the receiver with any information concerning the ciphering configuration of the network. In the exemplary situation described above, the network is in fact configured to use an enciphered mode of communication, but the appropriate encryption key / encode-decode unit

adapted to use that key is not present at the receiver. Thus, it should be emphasized that the indication provided in Bocci's system is only an indication of an ability to decrypt a received signal using a particular encryption key. It is not an indication that the communication network is configured to use an enciphered mode of communication, as claimed in the present application. This is a consequence of the indication provided by Bocci being derived at the receiver from the output of the encode-decode units (i.e. based on detection of a decrypted signal) rather than being derived in response to the receipt of a cipher mode control signal communicated from the mobile communication network, as claimed in the present application. Lack of such a cipher mode control signal in Talbot was previously acknowledged by the Examiner. Here it should further be noted that both Talbot and Bocci are based on the detection of decrypted data at the receiver and neither disclose a cipher mode control signal as claimed by the present invention.

For all of the foregoing reasons, it is respectfully submitted that all of the claims now present in the application are clearly novel and patentable over the prior art of record, and are in proper form for allowance. Accordingly, favorable reconsideration and allowance is respectfully requested. Should any unresolved issues remain, the Examiner is invited to call Applicants' attorney at the telephone number indicated below.

The Commissioner is hereby authorized to charge payment for the three month extension of time ($1020) as well as the RCE fee ($790) as well as any other fees associated with this communication or credit any over payment to Deposit Account No. 16-1350.

Respectfully submitted,

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Lisa Shimizu
Person Making Deposit